

**WE CLAIM:**

**1. A device for measuring the liquid volume in a tank comprising:**

**(a) a load cell positioned adjacent a port in the top wall of the tank;**

**(b) a modular displacement probe formed in plural discrete detachable segments adapted to be assembled on site, said probe supported by the load cell, and extending down into the tank, the displacement probe having a lower end near the tank bottom, whereby the load measured by the load cell gives the apparent weight of the probe when immersed in the liquid contents of the tank; and**

**(c) a suspension mechanism mounted at the tank port for supporting the load cell and the probe.**

**2. The device of Claim 1, wherein the probe is formed by substantially identical plural segments united by a joining collar positioned between each successive segment.**

3. The device of Claim 2, further comprising:

(a) a riser pipe secured in the tank port and extending upwardly therefrom;

5 (b) a mounting flange threaded onto the riser pipe;

(c) a flange cap secured to the flange, to which the hanger bracket is fastened.

10 4. The device of Claim 1, further comprising means mounted adjacent said tank port  
for measuring the temperature of the liquid contents of the tank.

15 5. The device of Claim 4, wherein the displacement probe has a vertically extending  
hollow bore open to the liquid contents of the tank, and supports a temperature  
measuring string extending downwardly through said hollow chamber, said string  
having a spaced array of temperature sensors positioned therealong.

6. The device of Claim 1, wherein the suspension mechanism is a universal joint  
insuring that the load cell maintains a constant attitude with respect to the horizontal.

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7. A device for measuring the liquid volume in a tank comprising:

(a) a load cell positioned adjacent a port in the top wall of the tank;

(b) a modular displacement probe formed in plural discrete detachable segments adapted to be assembled on site, said probe supported by the load cell, and extending down into the tank, the displacement probe having a lower end near the tank bottom, whereby the load measured by the load cell gives the apparent weight of the probe when immersed in the liquid contents of the tank; and

(c) means associated with the displacement probe for measuring the temperature of the liquid contents of the tank.

8. The device of Claim 7, wherein each detachable segment of the probe has a hollow interior which is registered with the hollow interior of the adjacent segment, whereby a hollow central bore is formed throughout the probe, and means for measuring temperature is a string of spaced temperature sensors positioned in said hollow central bore.